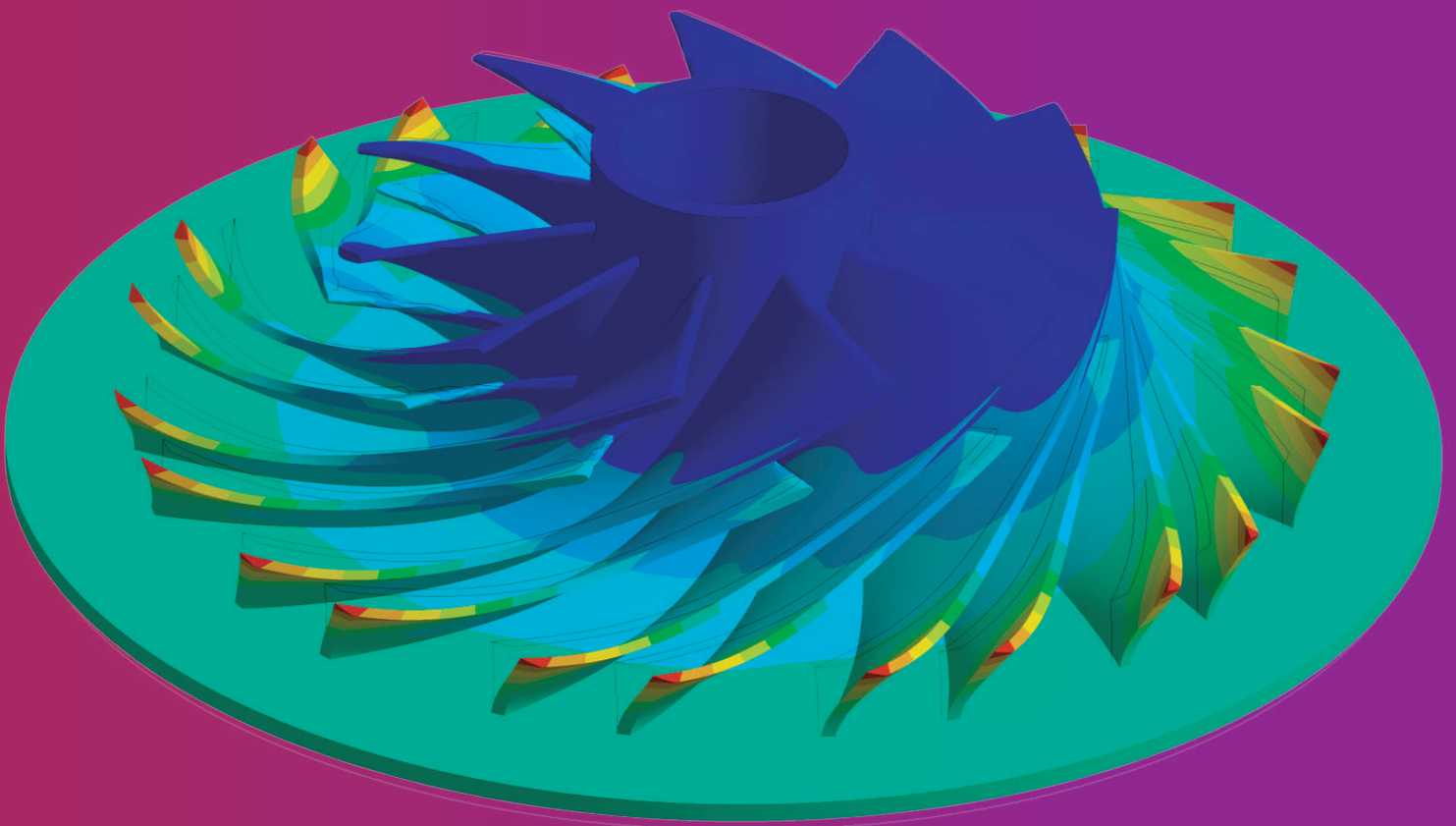


Nano
Degree Program

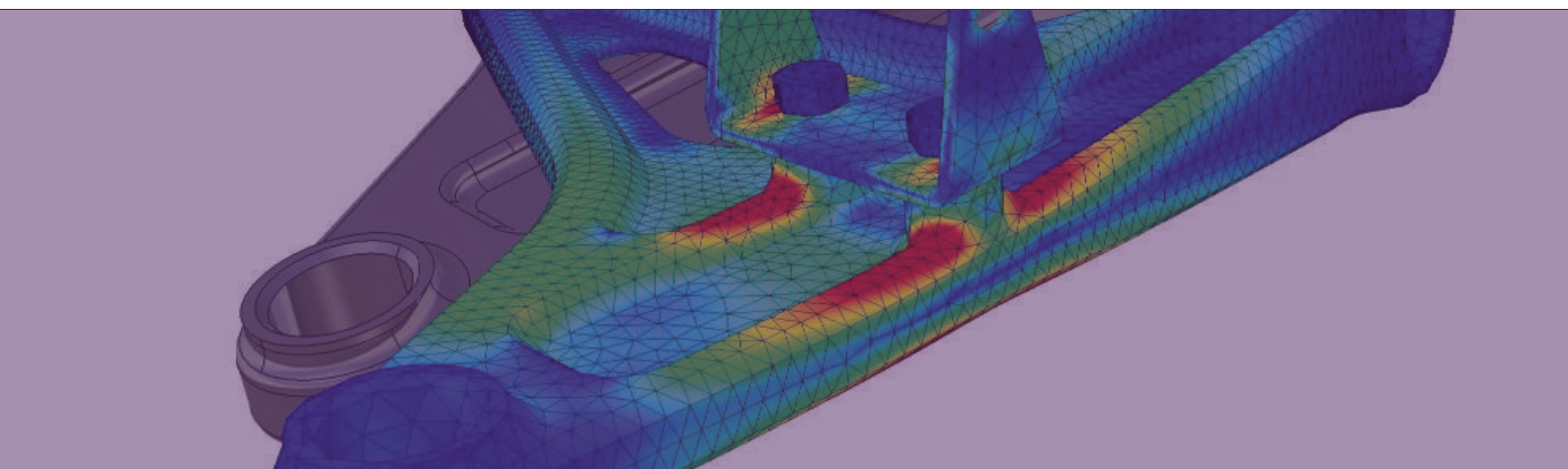
ANSYS - FEA/FEM Fundamentals





The global computer aided engineering market size was valued at USD 7.3 billion in 2019 and is expected to register a CAGR of 9.3% over the forecast period, owing to increased outsourcing of manufacturing processes to emerging economies such as India, China, and Russia. The market is poised for unprecedented growth over the forecast period as integrated software solutions eliminate the need for multiple prototypes and product recall concerns, thereby reducing the cost associated with prototyping and product recall strategy.

The CAE market is segmented into Finite Element Analysis (FEA), Computational Fluid Dynamics (CFD), multibody dynamics, and optimization and simulation. The FEA segment dominated the market for computer aided engineering in terms of revenue in 2019. FEA is a computational analysis methodology that helps in determining the strength of a product with respect to the loading. FEA simulates real components to analyze problems pertaining to heat transfer, structural analysis, electromagnetic potential, and mass transport.



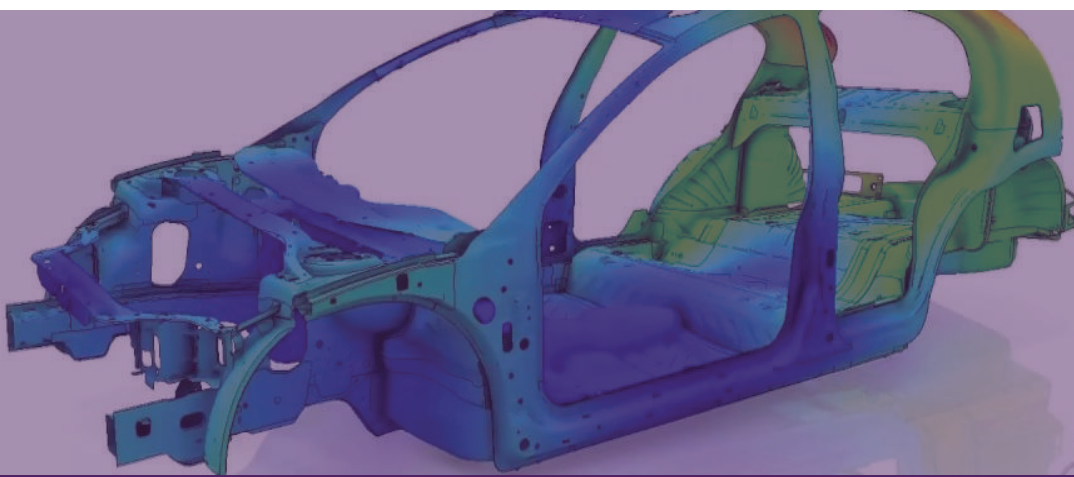
What are the program objectives?

This is a problem-based course where you'll learn by doing. The focus will be on understanding what's under the blackbox so as to move beyond garbage-in, garbage-out. You'll practice using a common solution approach to problems involving different physics: structural mechanics, fluid dynamics and heat transfer. We'll solve textbook examples to understand the fundamental principles of finite-element analysis and computational fluid dynamics. Then we'll apply these principles to simulate real-world examples in the tool including a bolted rocket assembly and a wind turbine rotor. By working through examples in a leading simulation tool that professionals use, you'll learn to move beyond button pushing and start thinking like an expert.

Join us to discover why simulations have changed how engineering is done and how you can be a part of this revolution.

What are the main highlights of the program?

- Learn without a career break with online classes available 24*7.
- One can access the course at their own pace, but with the investment of 3-5 hours/week, it can be finished within a month.
- This program empowers technocrats for student level competitions like SAE BAJA, SAE SUPRA and even Formula Bharat and Formula-e.
- The programme uses a Continuous Evaluation System that assesses the learners over convenient and regular intervals. Such a system provides timely and frequent feedback and helps busy working professionals stay on course with the programme.
- The education delivery method is a blend of classroom and experiential learning. Participants who will complete the programme become eligible for Mentorship and Placement help through our Job Fairs.





Who should apply?

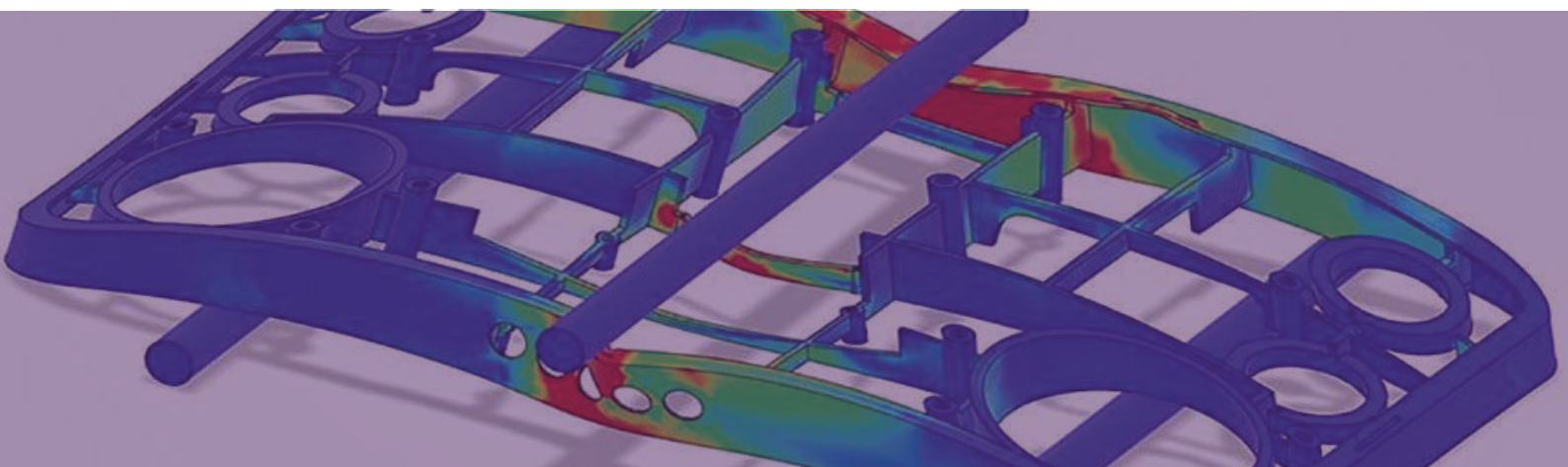
The programme is designed for students or professionals who are:

- Having a Diploma, BE / B.Tech or equivalent in domains such as Automotive, Mechanical, EEE, ECE, Instrumentation, Mechatronics.
- Designing enthusiasts (No academic qualification mandatory)
- Working in industries such as Automotive, Auto component, Design, Manufacturing, etc
- Working in Functional areas such as R&D, Analysis, Maintenance, Projects, component design etc.
- Interested in pursuing further studies on the part-time or full-time basis in Design and Engineering Sector.

What are the Technical Requirements?

The programme to give its best will need following requirements:

- Computer/ Laptop will provide you with the best experience, but this program is quite compatible with smartphones to make it feasible for students worldwide.
- High-speed internet for crystal clear experience, but this program can also run without buffering with below-average connectivity for reaching out students from suburban and rural areas.
- A student should make their notes for future reference.
- A student should have basic knowledge about high-school physics and chemistry, even though the pre-requisite of this programme will brush up one's basic concepts.
- A student should have a compatible computer for ANSYS software so that they can practice with the progress of the course.





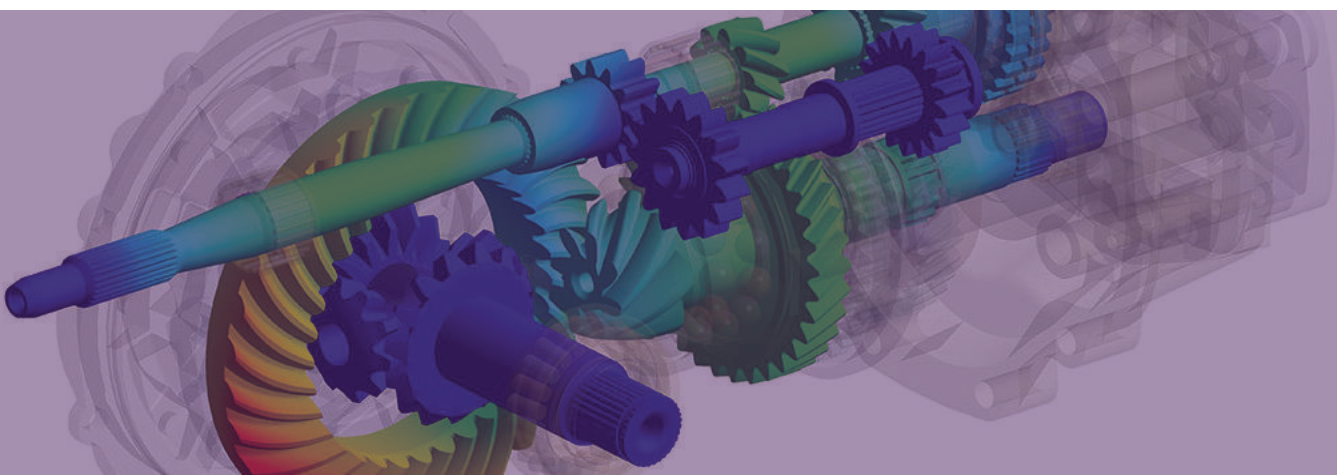
What is the learning methodology?

DIYguru presents a Nano Degree program on ANSYS-(FEA/FEM) Fundamental Certification Course. This program provides you with the most flexible learning environment possible. This program is offered as a self-paced program often referred to as asynchronous online program which is time independent, meaning that it can be accessed 24X7 within the tenure of 30 days. This program can be accessed from multiple devices which make it easy to learn on the go.

Lectures that are pre-recorded or slide presentation with voice-over commentary, interactive discussion boxes that foster student to student interaction, Email communication with the instructor are part of this process.

What are the learning outcomes?

- To develop learn and apply new theories, concepts and methods
- To develop extensive knowledge and understanding of a wide range of computer modeling and simulation software.
- Identify, formulates, and solves engineering problems
- Apply knowledge of mathematics, science, and engineering
- Design and conduct experiments, as well as to analyze and interpret data
- Big ideas in finite-element analysis and computational fluid dynamics
- Structural mechanics simulations using ANSYS Mechanical™
- Fluid dynamics simulations using ANSYS Fluent™
- Mathematical models underlying simulations
- Building simulations of real-world applications using ANSYS® software
- Verification and validation of simulations including checking against hand calculations
- Build an approach within engineering analysis and simulations like an expert





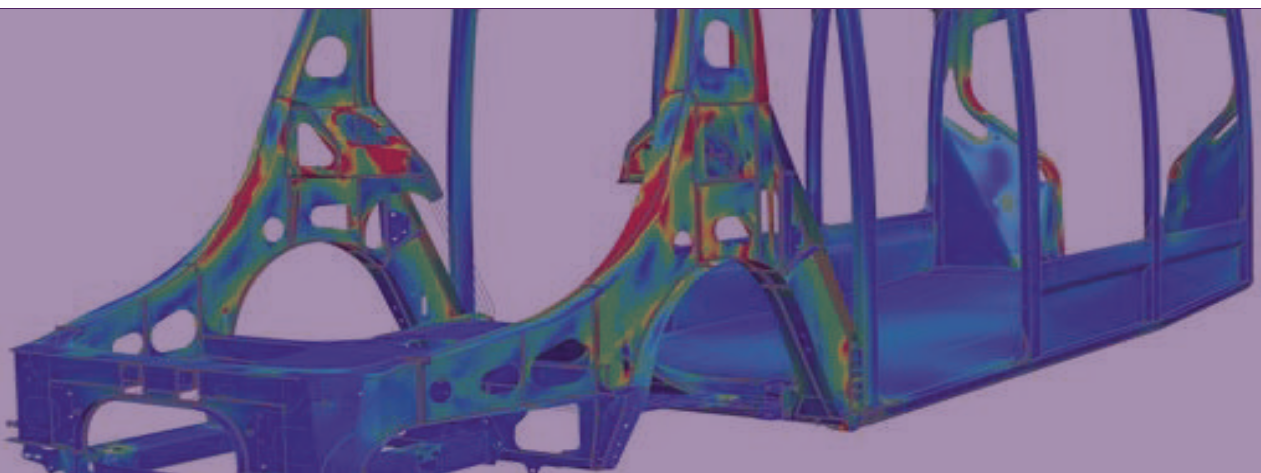
How to apply?

Enrollment procedure follows a few hassle-free steps:

- Signup with your operational e-mail ID.
- Select "Ansys- (FEA/FEM) Fundamental Certification Course".
- Select "Take the Course".
- Apply coupon code if applicable.
- Fill the required fields on the form.
- Select your preferred payment gateway.
- Pay the total amount.
- Select "Start Course" and shift yourself to an upskilling mode.

What is the fee structure?

The actual fee of this elite program is INR 7990 + 18% GST that is INR 9430 only.





Program Structure

Introduction

General Preprocessing

Static Structural Analysis

Remote Boundary Conditions

Vibration Analysis

Results and Postprocessing

Training Exercises

Mechanical Basics

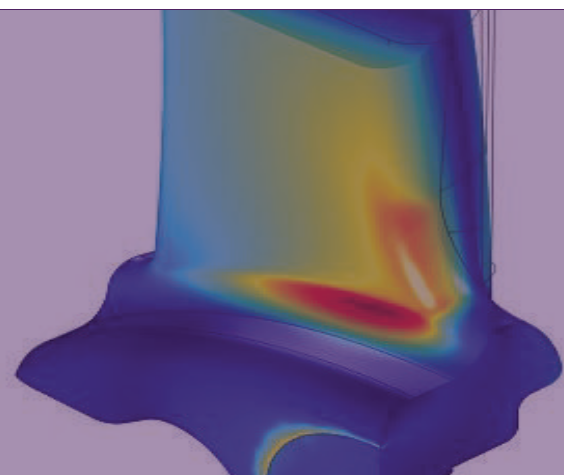
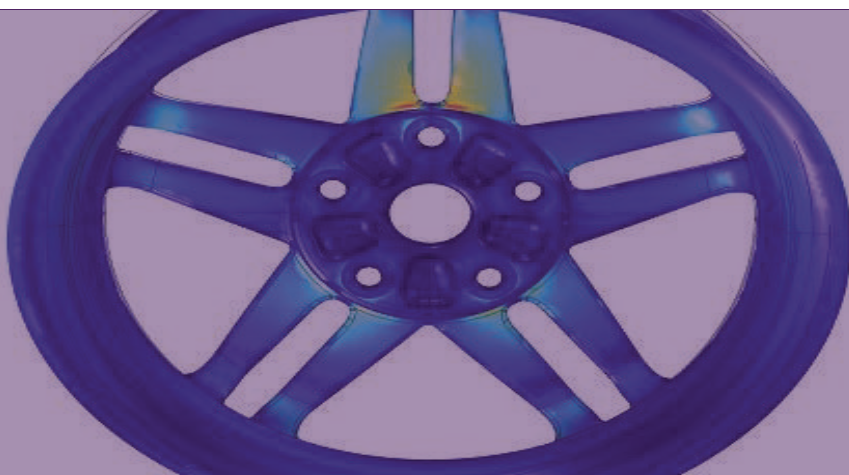
Meshing in Mechanical

Modelling Connections

Multistep Analysis

Thermal Analysis

CAD Parameters



TRUSTED BY



"Just a quick note to let you know how pleased and impressed we are with the two day training programme handled at our premises. We were very new to the Electric Vehicle aspect and terminology used for as a non - technical personnel. Though the topic of Electric vehicle is a bit typical and dry, the way the trainer has kept us in pace with interactive session and made the thing clear and clarified the doubts we raised was very much helpful "

- Rajesh Mutharaju, Head HR - Hyundai Motors



"At Bosch Bangalore & Coimbatore, the DIYguru training programme has helped a lot in improvising the concepts of Electric Vehicle Design & Engineering for our experienced and fresh employees. The trainers are of high quality and knowledgeable in terms of delivering the contents and making things understandable. We look forward to have a continuous relationship."

- R Shashi Kumar, Head HR - Robert Bosch Engineering



"Partnering with DIYguru we can see the budding entrepreneurs working closely on EV projects. I can see the interaction and enthuse which is there with all the young boys and girls who are part of this project. They are doing exceptionally well and I congratulate entire DIYguru team to further get more the guys and be a part of the electric revolution."

- Praveen Shrivastava, Zypp Mobycy



"DIYguru is giving a platform to new entrepreneurs in building up skills so that they get ready for the current market requirement. They are bridging the gap between the actual industrial requirement and conventional education system which are available with the schools and colleges."

- Sumit Agrawal,, Engineer & Entrepreneurs



"Doing this course helped me to understand the fundamentals of an electric vehicle, from Batteries to power train BMS to controller the basic know-hows are clear to me. This course helped me to change my attitude from mobility as a product to mobility as a service. As a student, I have got to understand the job and business opportunity which are waiting at our doorsteps within E mobility sector."

- Atharva Pitale, Yashwantrao Chavan College of Engineering

